

Applicants respectfully disagree with the rejection under 35 U.S.C. §102. Regarding the “at least 0.24” of Tuzuki et al. and the “at least 0.41” of Matsuba et al. compared with Applicants’ claimed “at least 0.5”, the Examiner asserts that “at least 0.24” encompasses 0.5 and any number  $> 0.5$ ; and “at least 0.41” encompasses 0.41 and any number larger than 0.41, which includes 0.5 and any number  $> 0.5$ . The Examiner asserts that, if not anticipated, this is at least obviousness.

Applicants note that MPEP §2131.03 states that when the prior art discloses a range that overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, a case-by-case determination must be made as to anticipation. The MPEP then indicates that as an example, if the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with “sufficient specificity” to constitute anticipation of the claims. In light of the limited specific viscosity teachings of the cited references, the claimed range does not appear to be disclosed with sufficient specificity. Therefore, the cited references would not anticipate the claimed invention.

The Examiner asserts that the “sufficient specificity” requirement only applied when the prior art discloses a range that touches, **overlaps**, or is within the claimed range, and suggests that the present case is not in one of the listed groups because the claimed range is fully within the prior art range. However, Applicants note that the definition of “overlap” includes the case where, as here, the claimed range is within the suggested range. Applicants note that the claimed ranges indeed overlap the range suggested by the cited reference, in all of the claimed range. For additional support, Applicants submit herewith a printout from the *American Heritage*

*Dictionary of the English Language, Fourth Edition*, which defines “overlap” as, “To lie or extend over and cover part of”, or “To have an area or range in common with.” Applicants emphasize that the ranges suggested by the cited reference indeed have an area or range in common with the respective ranges of the claimed invention, and indeed cover every part thereof.

Applicants further emphasize that the claims recite ranges that are less than, or more narrow than, the ranges of the cited reference.

With respect to the rejection under §103, the Examiner asserts that no unexpected results have been demonstrated for the claimed range because Applicant’s example 17 (second step) falls outside this claimed range, and many comparative examples (i.e., comparative examples 1-8) fall within the claimed range. The Examiner asserts that the submitted declaration has been considered but it does not demonstrate unexpected results with regard to the viscosity, particularly in consideration of the above-cited comparative examples.

Applicants respectfully disagree with this conclusion, because unexpected results are clearly indicated in both the specification as disclosed as well as the Declaration filed with the Response on March 14, 2003. Moreover, the Examiner does not appear to compare the entirety of the Examples and Comparative Examples.

According to claim 1, the processing aid of the present invention is prepared by a two-step polymerization, and is characterized in that:

- the viscosity of the first-step polymer is at least 0.7 **and**
- the viscosity of the second-step polymer is at least 0.5.

The Examiner has indicated that the advantageous effects of the present invention have not been demonstrated because: evaluation results of Example 17 are excellent, in spite of the second-step polymer thereof not being within the claimed range; and the evaluation results of

Comparative Examples 1 to 8 are poor, in spite of the polymers thereof being within the claimed range.

Applicants note that the specific viscosity of the second-step polymer of Example 17 is 0.63 as shown in Table 4 and fulfills a specific viscosity of at least 0.5, which is an element of Claim 1. Therefore, the Examiner's assertion that "the second-step polymer of Example 17 is not within the claimed range" is incorrect. The evaluation results of Example 17 are excellent, as those of the other Examples, because the second-step polymer of Example 17 is within the claimed range.

As to the Examiner's assertion that Comparative Examples 1-8 fall within the claimed ranges for viscosity and, by exhibiting poor properties, therefore destroy a showing of unexpected results, Applicants note that while these comparative examples have some limitations that in the claimed ranges, they do not include all the remaining limitations of the claims. In particular, Comparative Examples 1, 2, 3, 7 and 8 do not satisfy at least the claimed limitation that monomer mixture (A) comprises 51 to 100% by weight of methyl methacrylate. Comparative Examples 4, 5 and 6 do not appear to satisfy the claimed limitation of monomer mixture B containing 51 to 100% by weight of an acrylate ester or methacrylate ester except methyl methacrylate. All Comparative Examples 1-8 exhibit poor gelation, formability or transparency. Likewise, in the cited references, one or both of specific viscosities of first-step polymer and second-step polymer is/are **lower** than the claimed specific viscosities of the present invention, as Applicants noted in the previously submitted remarks and declaration.

Consequently, when the results of Example 17 and Comparative Examples 1 to 8 are investigated in consideration of the composition and the specific viscosity of the claimed range,

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the processing aid of the present invention is obviously advantageous compared to the polymer of the cited references, in view of gelation properties and foaming properties.

In view of the accompanying remarks, Applicant submits that that the claims are in condition for allowance. Applicant requests such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner may charge any fees for such an extension or any other fees that may be due with respect to this paper to Deposit Account No. 50-2866.

Respectfully submitted,

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Enclosure: "Overlap", from the *American Heritage Dictionary of the English Language, Fourth Edition*

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